T-P-3606-DT
Differential Effect of Longitudinal Physical Activity Pattern on Trajectories of Metabolic Syndrome Components in a Normal Weight and Overweight/Obese Mexican Sample
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Background: Background: The metabolic syndrome (MetSx) cluster - high blood pressure (BP), high blood glucose, high waist circumference (WC), low HDL cholesterol (HDL-C) and high triglyceride (TG) levels - increase the risk of heart disease, stroke and diabetes. BMI and physical activity (PA) are important contributors of changes in MetSx components. It is unclear how PA modifies BP, glucose, WC, HDL-C and TG in healthy people independently of BMI over time. The aim of our study was to assess the effect of PA pattern in subjects with normal weight (NW) and overweight/obesity (OW/OB)
Methods: Methods: Cohort study with a baseline measurement in 2004-06 and a follow up 6 years later. A total of 557 NW and 489 OW/OB healthy Mexican adults were included. Fasting glucose, TG, HDL-C, WC and BP were measured, physical activity (PA) and diet data were self-reported. Participants were classified in 4 PA patterns according to their PA level variation over time: 1) Consistently inactive, 2) Active only at baseline 3) Active only at follow up, 4) Consistently active. PA pattern 1 was used as reference for all analysis. Models were adjusted for age, sex, education, alcohol intake, smoking status and energy intake and included only participants with normal baseline values of each variable
Results: Results: PA pattern 2 and 3 were associated with a 1.9 and 2.6 cm decrease in WC in OW/OB participants. PA pattern 4 was associated with a reduction of 3.5 mg/dL of fasting glucose in OW/OB participants. A reduction of 14 mg/dl of TG was observed in NW participants with PA pattern 2 and a 12.2 mg/reduction was seen in those NW participants with PA pattern 4; a 19.1 mg/dl reduction in TG was observed in OW/OB participants with PA pattern 3. There was no effect of PA pattern on BP in OW/OB participants; NW participants with PA pattern 2 had a reduction of 3.9 and 3.6 mmHg in systolic and diastolic BP
Conclusions: Conclusions: PA patterns may have different impact on the trajectories of MetSx components in people with NW or OW/OB

T-P-3607
Nutritional and Physical Activity Knowledge Association with Body Fat in Adolescents
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Background: Knowledge enhancement has been referred as a mean to improve nutrition and physical activity, and reduce obesity. This work aimed to identify the difference of nutrition and physical activity knowledge according to body fat and physical activity levels in adolescents.
Methods: This study was a cross sectional analysis involving 734 adolescents. Body fat was determined using electric bioimpedance, and physical activity was assessed by accelerometer. Adolescents were divided in groups according to physical activity levels (high versus low) and body fat (overfat versus non-overfat). They were then divided into four groups: "high physical activity/ non-overfat"; "high physical activity/ overfat"; "low physical activity/ non-overfat"; and "low physical activity/ overfat". Nutrition and Physical knowledge was assessed by questionnaires.
Results: Body fat percentage exposed 30.8 % overfat/ obese adolescents, and daily moderate to vigorous physical activity lasted in average 47.9 (SD=27.49) minutes. High physical activity adolescents presented higher physical activity knowledge (p=.044) and the low physical activity/overfat group scored the worst on experts' nutritional recommendations knowledge.
Conclusions: Poor nutritional knowledge was significantly associated with the simultaneous occurrence of overfat and low physical activity levels. Interventions aimed to improve adolescents' body composition and physical activity should address the knowledge about these two topics.

T-P-3608-DT
One Size Doesn't Fit All: Associations between Neighborhood Walkability and Physical Activity Depends on Age and Sex of Residents
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Background: Low-income African American adults are disproportionately affected by obesity and often do not engage in health-promoting levels of moderate-to-vigorous physical activity (MVPA). While neighborhood greenspace and walkability have been associated with increased MVPA, evidence also suggests that living in areas with high rates of crime limits MVPA. It is not clear to what extent the confluence of neighborhood greenspace, walkability and crime, especially in urban areas, might impact MVPA in middle-aged low-income African American adults or how associations may vary by age and sex.
Methods: We examined self-reported sociodemographics, car ownership and functional limitation data; accelerometry-derived MVPA; and objective measures of neighborhood greenspace, walkability, and crime among 791 predominantly African-American adults (mean age 56 years) living in two U.S. low-income neighborhoods. We examined associations of neighborhood variables with MVPA using zero-inflated negative binomial regression models with interactions by age (over 65 years) and sex.
Results: Overall, residents engaged in very little to no MVPA regardless of where they lived. Looking within age-sex subroups, there was one significant association among women under the age of 65 years, for whom living with more walkable surrounds was associated with more time engaged in MVPA in (β=0.62, p=0.004) as compared to their counterparts living in less walkable areas. Neither measures of crime nor greenspace were associated with MVPA in age-sex subgroups.
Conclusions: Neighborhood walkability may play a stronger role on MVPA than accessible greenspace or crime in low-income urban communities. Walkability may differentially impact residents depending on their age and sex, which suggests tailoring public health policy design and implementation according to neighborhood demographics to improve activity for all.

T-P-3609-DT
Estimated Minutes of Physical Activity in Adolescents by Wrist-Worn GENEActiv Accelerometers
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Background: Objective methods to measure free-living physical activity (PA) in adolescents are limited. Measurement of PA using monitors placed on the wrist, rather than on the waist, improves compliance in wear time, but cutpoints (used to determine PA intensity) for wrist-worn accelerometers in adolescents are not available. We compared the difference between using the adult cutpoints versus those developed for children to interpret GENEActiv accelerometer data.
Methods: 991 students at 8 high schools wore a GENEActiv device for 7 days as part of baseline data collection for an obesity prevention and weight management study (ACTION PAC; ClinicalTrials.gov Identifier: NCT02502383). Valid data from 835 participants were